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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,768	08/06/2001	Edward G. Callway	00100.00.0820	9391

29153 7590 06/16/2010

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EXAMINER	
VAN HANDEL, MICHAEL P	
ART UNIT	PAPER NUMBER
2424	

MAIL DATE	DELIVERY MODE
06/16/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/923,768	CALLWAY ET AL.	
	Examiner	Art Unit	
	MICHAEL VAN HANDEL	2424	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-20 and 24-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-20 and 24-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/25/2010 has been entered.

Response to Amendment

2. This action is responsive to an Amendment filed 2/25/2010. Claims **15-20**, **24-29** are pending. Claims **20**, **29** are amended. Claims **1-14**, **21-23**, **30** are canceled. The examiner hereby withdraws the objection to claim **20** in light of the amendment.

Response to Arguments

3. Applicant's arguments regarding claims **15**, **20**, **24**, and **26-29**, filed 2/25/2010, have been fully considered, but they are not persuasive.

Regarding claims **15**, **20**, **24**, and **26-29**, the applicant argues that Hannah fails to teach or suggest sending graphics drawing commands wirelessly to be processed remotely, wherein the graphics drawing commands include at least geometric primitive information. The examiner respectfully disagrees. The examiner first notes the rejection of claims 15, 20, 24, and 26-29 under 35 USC 112, first paragraph below. Hannah discloses that motion vectors are stored in

video encoding to describe how a video receiver should render an image. Hannah illustrates this in the example of compressing a motorcyclist object 174c in a sequence of video frames. Since the motorcyclist image is likely to move to a different set of macroblocks in successive frames of the image, a macroblock 172 of a video frame 170 may be compared to macroblocks 172 in both previous frames and subsequent frames, looking for a matching image, such as the motorcyclist object 174c. Once found, a representation of the movement of the object, known as a motion vector, may be stored in lieu of a complete representation of the movement of the object 174c (col. 4, l. 44-52 & Fig. 2). Similarly, a tree object that is found in the same set of macroblocks in subsequent frames may be encoded by storing a reference to a single encoded frame in all subsequent frames which include the tree (col. 4, l. 33-43). Thus, the examiner interprets "motion vectors" and frame references to be graphics drawing commands, "wherein the graphics drawing commands include at least geometric primitive information," as currently claimed, because objects within video are moved and rendered based on the motion vectors and frame references.

The applicant argues that it is well known in the art that graphics drawing commands are used to create graphics objects by instructing graphics processing circuitry to draw a line, primitive, object or other graphic based on the drawing commands. The examiner notes that "[d]uring patent examination, the pending claims must be 'given their broadest reasonable interpretation consistent with the specification.'" The "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in

applicant's specification." "Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified." See **MPEP 2111**. The examiner further notes that Hannah discloses drawing objects based on the motion vectors. As noted above, Hannah discloses rendering an object, such as a motorcycle or tree in a frame based on an object in a previous frame and a motion vector. The examiner notes that the object is drawn based on the motion vectors. Applicant acknowledges this fact, stating that a video image is formed by shifting pixels from the previous picture using the motion vectors. As such, the examiner maintains that motion vectors are commands for drawing graphics in a particular location in a video frame.

Specification

4. The amendment filed 2/25/2010 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

Graphical data is rendered by executing instructions from an application that is drawing data to a display. During image rendering, three dimensional data is processed into a two dimensional image suitable for display. The three dimensional image data represents attributes such as color, opacity, texture, depth, and perspective information. The draw commands from a program drawing to the display may include, for example, X and Y coordinates for the vertices of the primitive, as well as some attribute parameters for the primitive, and a drawing command.

The execution of drawing commands to generate a display image is known as graphics processing.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims **15-20**, **24-29** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to claims **15**, **20**, **24**, and **26-29**, the examiner fails to find support in Applicant's specification for the amended phrase "wherein the graphics drawing commands include at least geometric primitive information," as currently claimed. Applicant's specification states that the graphics processing circuit processes rendering commands to produce rendered graphics image data (p. 2, paragraph 18 of published application US 2003/0027517), but the examiner fails to find where in Applicant's specification it is stated that the graphics drawing commands include at least geometric primitive information, as currently claimed.

Claims **16-19** and **25** are rejected as being dependent on the above-mentioned independent claims.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **15-20**, **24-29** are rejected under 35 U.S.C. 102(e) as being anticipated by Hannah.

Referring to claim **15**, Hannah discloses a method for providing image data for a wireless monitor comprising:

- in a device:
    - processing graphics drawing commands using a first processor to produce rendered graphics image data (enhancement block 104 adds graphical elements to video frames)(col. 2, l. 13-34, 49-56) and storing the rendered graphics image data to a frame buffer, wherein the graphics drawing commands include at least geometric primitive information (the examiner notes that a frame buffer is inherent to the enhancement block 104, since the enhancement block 104 derives motion vector hints and generates an enhanced image 114 based upon an enhancement made to an original image)(col. 2, l. 13-24, 50-67; col. 3, l. 1-67; col. 4, l. 1-67; col. 5, l. 1-67; col. 6, l. 58-64; col. 7, l. 29-48; & Figs. 4, 6);

- retrieving the rendered graphics image data from the frame buffer over a local bus using a second processor (encoder 106)(Fig. 1);
- encoding, by the second processor, the retrieved rendered graphics image data to produce encoded graphics image data (col. 2, l. 66-67; col. 3, l. 1-2, 5-16; & col. 7, l. 29-39); and
- sending the encoded graphics image data to a wireless monitor using a short range wireless transmitter (the examiner notes that a short range wireless transmitter and a short range wireless receiver are inherent to re-broadcasting MPEG-2 transmissions to remote displays without the need for a cable connection)(col. 2, l. 28-32; col. 3, l. 1-2, 5-16; col. 5, l. 46-53; & col. 9, l. 30-36).

Referring to claim **16**, Hannah discloses the method of claim 15, comprising:

- decompressing a compressed video stream to produce a decompressed video stream (col. 2, l. 20-22, 38-48);
- recompressing the decompressed video stream to produce a recompressed video stream (col. 2, l. 30-34; col. 3, l. 1-2, 5-16); and wherein sending the encoded graphics image includes sending the recompressed video stream using the short range wireless transmitter (col. 2, l. 20-34, 66-67; col. 3, l. 1-2, 5-16; col. 4, l. 7-8; col. 5, l. 60-63; & col. 7, l. 29-63).

Referring to claim **17**, Hannah discloses the method of claim 16, comprising:

- combining the rendered graphics image data with the decompressed video stream to produce frames of image data (col. 2, l. 13-67 & col. 3, l. 1-2, 5-16);

- storing the frames of image data in the frame buffer prior to recompressing (see examiner's note regarding the frame buffer in claim 10 above); and
- retrieving the frames of image data for recompression (col. 2, l. 66-67; col. 3, l. 1-2, 5-16; col. 7, l. 29-39).

Referring to claim **18**, Hannah discloses the method of claim 15, comprising locally displaying the rendered graphics image data on a local display (col. 2, l. 35-48 & Fig. 1).

Referring to claim **19**, Hannah discloses the method of claim 15, comprising:

- receiving, by the wireless display, a compressed video stream containing graphics and recompressed video (the examiner notes that this is inherent to Hannah, since it is required for reception of the transmitted graphics and video)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57);
- decompressing the received compressed video stream by the wireless display and producing decompressed image frames (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed in order to view the content); and
- displaying the decompressed image frames on the wireless display (col. 5, l. 54-57).

Referring to claim **20**, Hannah discloses the method for providing image data for a wireless monitor comprising:

- in a device:
    - processing first graphics drawing commands using a first processor (decoder 102)(Figs. 1, 5, 6) to produce rendered graphics image data and storing the rendered graphics image data to a frame buffer, wherein the first graphics

drawing commands include at least geometric primitive information (the examiner notes that a frame buffer is inherent to the enhancement block 104, since the enhancement block 104 derives motion vector hints and generates an enhanced image 114 based upon an enhancement made to an original image)(col. 2, l. 13-24, 50-67; col. 3, l. 1-67; col. 4, l. 1-67; col. 5, l. 1-67; col. 6, l. 58-64; col. 7, l. 29-48; & Figs. 4, 6);

- retrieving the rendered graphics image data from the frame buffer over a local bus using a second processor (encoder 106)(Fig. 1);
- encoding, by the second processor, the retrieved rendered graphics image data to produce encoded graphics image data (col. 2, l. 66-67; col. 3, l. 1-2, 5-16; col. 7, l. 29-39);
- sending the encoded graphics image data to a wireless monitor using a short range wireless transmitter (the examiner notes that a short range wireless transmitter and a short range wireless receiver are inherent to re-broadcasting MPEG-2 transmissions to remote displays without the need for a cable connection)(col. 2, l. 28-32; col. 3, l. 1-2, 5-16; col. 5, l. 46-53; & col. 9, l. 30-36); and
- wirelessly sending second graphic drawing commands to a short range wireless receiver (the examiner notes that Hannah discloses sending motion vectors describing the color, dimension, and motion of objects in a video stream and that some of these motion vectors could be unaffected motion

vectors 118)(col. 3, l. 40-50; col. 4, l. 44-52; col. 6, l. 58-60; & col. 7, l. 40-51; & Fig. 2).

Referring to claim **24**, Hannah discloses a method for providing image data for a wireless monitor comprising:

- decompressing, by a first apparatus, a compressed video stream to produce a decompressed video stream (col. 2, l. 20-22, 38-48);
- recompressing the decompressed video stream to produce a recompressed video stream (col. 2, l. 30-34; col. 3, l. 1-2, 5-16);
- sending the recompressed video stream wirelessly and sending graphics drawing commands wirelessly to be processed remotely, wherein the graphics drawing commands include at least geometric primitive information (the examiner notes that motion vectors are transmitted in the video stream and used in decoding and decompressing the video images. The examiner interprets these to be graphics drawing commands)(col. 2, l. 20-34, 66-67; col. 3, l. 1-2, 5-16, 36-40; col. 4, l. 7-8; col. 5, l. 60-63; & col. 7, l. 29-63).

Referring to claim **25**, Hannah discloses the method of claim 24 comprising:

- processing, by a second apparatus, wirelessly received graphics drawing commands to produce rendered graphics data (the examiner notes that this is inherent to Hannah, since it is required for reception of the transmitted graphics and video)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57); and
- decompressing the recompressed video stream and combining the rendered graphics image data with the decompressed video stream to produce frames of image data (the

examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed in order to view the video and graphics content).

Referring to claims **26** and **27**, Hannah discloses a method/apparatus for processing graphics and video comprising:

- recompressing a received compressed video stream to produce a recompressed video stream (col. 2, l. 30-34; col. 3, l. 1-2, 5-16); and
- transmitting wirelessly said recompressed video stream with graphics drawing commands, wherein the graphics drawing commands include at least geometric primitive information (the examiner notes that motion vectors are transmitted in the video stream and used in decoding and decompressing the video images. The examiner interprets these to be graphics drawing commands)(col. 2, l. 20-34, 66-67; col. 3, l. 1-2, 5-16, 36-40; col. 4, l. 7-8; col. 5, l. 60-63; & col. 7, l. 29-63).

Referring to claim **28**, Hannah discloses a method for providing image data for a wireless display comprising:

- receiving, via a short range wireless receiver, a recompressed video stream and graphics drawing commands, wherein the graphics drawing commands include at least geometric primitive information (the examiner notes that this is inherent to Hannah, since it is required for reception of the transmitted graphics and video without a cable connection)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57);
- decompressing the received recompressed video stream to produce decompressed image frames and processing the wirelessly received graphics drawing commands to produce rendered graphics image data (the examiner notes that this is inherent to

Hannah, since the received compressed video stream must be decompressed and processed in order to view the video and graphics content); and

- displaying the decompressed image frames and graphics image data on a local display (col. 5, l. 54-57).

Referring to claim **29**, Hannah discloses a wireless display system comprising:

- a first unit operative to:
    - send graphics drawing commands to a short range wireless receiver using a short range wireless transmitter, wherein the graphics drawing commands include at least geometric primitive information (the examiner notes that motion vectors are transmitted in the video stream and used in decoding and decompressing the video images. The examiner interprets these to be graphics drawing commands. The examiner further notes that a short range wireless transmitter and a short range wireless receiver are inherent to re-broadcasting MPEG-2 transmissions to remote displays without the need for a cable connection)(col. 2, l. 28-32; col. 3, l. 1-2, 5-16; col. 5, l. 46-53; & col. 9, l. 30-36); and
- a wireless display operative to:
    - receive, via a short range wireless receiver, the recompressed video stream and graphics drawing commands (the examiner notes that this is inherent to Hannah, since it is required for reception of the transmitted graphics and video without a cable connection)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57);

- decompress the received recompressed video stream to produce decompressed image frames and process the wirelessly received graphics drawing commands to produce rendered graphics image data (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed and processed in order to view the video and graphics content); and
- display the decompressed image frames and the rendered graphics image data on a local display (col. 5, l. 54-57).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL VAN HANDEL whose telephone number is (571)272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Van Handel/
Examiner, Art Unit 2424

6/14/2010